

GAS GENERATORABSTRACT

The present invention provides a gas generator (10) that includes a housing (12) formed from coupling a cap (14) and a base (16) in nested relationship. At least one attachment member (20) is preferably formed symmetrically about and integral to a peripheral flange (18) of the cap (14). The contour of a peripheral edge (60) formed from recessed and protruding portions provides interlocking communication between the cap (14) and the base (16). A plurality of hook members (36) is symmetrically formed about the peripheral edge (38) of the base (16). Each hook member (36) corresponds to a respective protruding portion (30) of the cap (14). An arcuate groove (40) is formed by an inner wall (42) of each respective hook member (36). The groove (40) is preferably tapered whereby the arcuate length of the groove or the inner wall (42) is greater at the first end (44) than at the second end (46). As a result, the base (16) when rotatably fixed to the cap (14) provides an interference fit at the hook/cap periphery interface. The cap (14) and the base (16) may be adhesively connected along the flange (18) and the peripheral edge (38), avoiding other typical connection means such as welding or crimping unless also desired. The manufacturing costs are thereby reduced given the enhanced simplicity of construction of the inflator (10).

In the same way, the igniter (52) may also be press fit and/or adhesively connected to the annulus (48) whereby typical crimping or welding is not required. A bar code 62 may be adhesively applied to the exterior of housing (12) or to the gas generator (10) in general. Data such as the weight and type of propellant (26), the date of manufacture, and the material lot may be codified within the bar code thereby simplifying future identification and compliance with various safety standards. The bar code can then be scanned using state-of-the-art equipment developed for that purpose. Methods directed to the assembly of the above referenced structure are also contemplated.

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